4:Grajdanzev--118 S-4 (no date) 1942 Formosans
116, 494, 496, 177.49 Japan
636.49

"All kinds of communications are in use in Taiwan——from the primitive sedan chair and jinrikisha (rickshaw) to the airplane, but modern means of communications are either in the hands of the Japanese government or of Japanese companies. There are 3,375 km. of improved roads. These play an increasingly important part in inland communications because the railroads do not link up the whole island in a complete network; the eastern part has no railroad connections with the rest of the island. The number of motor cars and buses is small (1). The buses on the roads are used by the government

1. No statistics are published by the government.

railways as feeders for the rail services."

4:Grajdanzev--118 [2] S-4 (no date) 1942 Formosans
116, 171, 496, 497

"Some Railroad Statistics of Taiwan and Japan for 1937

	Taiwan	Japan proper
Length of railroads (km.)	1,550	26,797
Same per 100 sq. km. (km.)	4.3	7.0
Passengers carried (1.000)	27,488	1,739,688
Trips per capita	4.9	24.1
Freight carried (1,000 tons)	8,187	130,813
Freight, per capita (tons)	1.5	1.8
Receipts from passengers (million yen)	11.2	391.1
Average cost per trip (yen)	0.41	0.22
Receipts from freight (million yen)	18.5	306.4
Average cost per ton (yen)	2.26	2.34"

4:Granjdanzev--118-119 S-4 (no date) 1942 Formosans
116, 454, 496, 655, 177.49 Japan
636.49

"In 1926 there were 950 km.(1) of government railroads in Taiwan; in 1938 there were

1. Taiwan, Its System of Communication and Transportation, 1929.

1,040 km. The lengths of private railways at the same dates were 525 km. and 521 km. respec-[119]tively—a slight decrease. In other words, in the last decade the construction of new railroads in Taiwan has almost stopped. At the end of 1938 the capital invested in the government railroads including expenditures on repairs and restorations was ¥172,499,691."

4:Grajdanzev--119 S-4 (no date) 1942 Formosans
116, 171, 496

"The table above [see preceding note page 118--analyst] compares railroad data in Taiwan and in Japan.

These figures may appear unimportant, but they are essential for our investigation because only in this way is it possible to discover certain important relationships. It was already mentioned that in the last eleven years the total length of the railways in Taiwan increased only slightly——by five per cent, while in Japan in the last nine years (1928-37) the increase was thirty-nine per cent. The network of railways in Japan is now almost twice as dense as that of Taiwan."

4:Grajdanzev--189-190 S-4 (no date) 1942 Formosans -1-2
116, 487, 724, 496

"A base of operations cannot be considered only as a port. It must have enough room for deployment of troops and for general defense purposes. Taiwan is excellent in this respect; its few defects will be mentioned later. Its system of communications permits the authorities easily to move troops to any threatened point. An attack on Taiwan can be only air-borne or sea-borne. The nearest place on the continent, Foochow, is 115 miles from Tamsui. Under existing conditions in China, (and they hardly can be greatly changed in the next two years) an air attack from this direction is unlikely. An airborne attack on a large island from an aircraft carrier cannot be decisive. Aside from long-range sporadic bombing, Taiwan may expect only a major seaborne attack, an eventuality foreseen by the Japanese and widely discussed on the island. To repel an invasion by sea a well-developed network of communications exists on the island. The state of railways and roads on the island was discussed earlier in this book. Here it is sufficient to point out one defect in the railway system of the island: the western longitudinal railway is not connected with the eastern longitudinal railway because of the prohibitive cost of construction in the mountainous districts. However the whole coastline is followed by a road and there are four good automobile roads connecting the east coast with the west, so that troops may be easily shifted to most of the points on the east coast. [190] The west coast of the island is largely flat and easy for debarkation, but on that side of the island the communications are best. The eastern shore presents a mountain barrier falling abruptly to the sea, except for mouths of some rivers where beaches are available. However, in one respect this mountainous character may be a help to the invading

party: in case of air superiority on its side the bombing of bridges, viaducts, etc., may prevent the arrival of reinforcements and will permit a landing party to consolidate its hold over some part of the shoreline."

6: Kirchhoff--38 [2] U-4 (no date) 1895 Formosans
116, 206, 491, 496

But the most recent and most important advance has to do with communications. At least a beginning is being made with the construction of more substantial roads to connect the interior, the posts are being put on a systematic and unified basis and, under the first Governor, Liu-ming-tschuan, who lent an ear with unusual readiness to the counsels of foreigners, the first railroad to be approved by the Chinese Government has been built. It runs from the harbor of Ki-lung to Sin-tschu, and a continuation running via Tai-uan to Tai-nan is being prepared by means of alinement surveying (Tracenvermessung). In 1887 and 1888 the telegraph line running from Ta-kao to An-ping was carried on to Tam-sui, Tai-pe and Ki-lung, and at Tam-sui Formosa was connected by cable with the mainland, and at An-ping with the Fisher Islands.

25: Plaut--32 U-4 (no date) 1903 Formosans
116, 206, 496, 654, 177.65 China
636.65

Liu-Ming-Chuan [EJ: the Chinese Viceroy appointed in 1884] was eager to make Formosa more progressive. So he built a railroad from Kelung to the capital T'ai-pei-fu, and from there on to Hsin-chu; he connected the capital T'ai-pei to T'ai-nan and the Pescadores with a telegraph line, and then he made Formosa a part of the world telegraph system by constructing a cable to Futchou. He also established a well-regulated postal system. Industry, including sugar, also received his support. Although Liu-Ming-Chuang's administration was very beneficial for Formosa, he aroused much dissatisfaction by raising the taxes and levying an inland duty, for the previous revenues were not sufficient to defray the costs of his innovations.

497 with the A-li-shan (阿里山) forestry area, link Fengyuan to Pahsien-shan forestry area, and unite Tuchang (土場) with Lotung westward for lumber from Mount T'ai-p'ing (太平). There are many other companies and various coal mines that operate short sections of narrow gauge railways.

496 The TRA is the largest and the sole publicly owned carrier on the island. Its western system comprises a network of main and branch lines of 42" gauge tracks approximately 472 miles (760) kilometers) long. The main line links Keelung with Kaohsiung while connecting major cities of Taipei, Hsinchu, Taichung, Chiayi, Tainan, and Pingtung. This line has four tracks between Keelung and Patu, double tracks between Patu and Chunan, between Minhsiung and Chiayi, and between Hsinshih and Fengshan, and single tracks for the rest. It forms a loop between Chunan and Changhua with one track along the coast and the other through the mountains. The Eastern System, of 30" gauge single track, connects Hualien and Taitung over a distance of 110 miles (176 kilometers).[2]

497 Traffic (both freight and passenger movements) has been on the increase in recent years due to the increase in population and the expansion of industrial activities. Railroad facilities are taxed to their limit in spite of the fact that new rolling stock has been added, some branch lines have been extended, and operational efficiency has been increased. In 1955, the number of passengers carried by TRA alone

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2. Ibid.

48: Chen E-4 (no date) 1955 AD1 Formosa AD1

In 1942 there were 2,593 inhabitants per doctor, or 4 doctors per 10,000 inhabitants (computed from 14: Table 484).[9]

12. Transportation

A railroad from Keelung to Hsinchu was already constructed by the Machurian government. The railroad mileage increased gradually after the Japanese occupation. The main line from Keelung to Kaohsiung was completed by 1908. New branches, double tracks, and sidings were added rapidly, particularly during the 1920's. By 1930, the railroad system of the Japanese era was generally completed. As to passenger traffic, the number of passengers in 1931 was about 21 times of the number of 1901, and between 1931 and 1941 the number of passenger was almost tripled.[10] The mileage of highways was also rose rapidly after the 1920's (14: Table 449). It is interesting to note that, the number of bicycles, automobiles and trucks began to increase after 1920 (Fig. 4, Fig. 5). When bicycles were first imported, people were surprised by their high speed, and thought they were some magical thing. Now they became familiar with them, and utilized them more and more. This is a sign of the change of attitude among the people.

Before transportation was developed, different localities within an area could not exchange and trade their products, and the failure of crop in one locality would cause local famine. W. S. Thompson, who stayed some months in Nanking, China, in 1930-31, reported: at that time rice was so cheap in Nanking that many farmers were going bankrupt. At the same time people were starving by the hundred of thousands (some say by the millions) in northwest China. There was no means of transportation to let the two embarassed localities help each other, so local famine was inevitable. This situation has been very common in the past. Such prosperous and well-organized countries as England, France, and Sweden had severe local famines from time to time, even during the first half of the nineteenth century (16: pp. 67-68).

Development of transportation not only can stabilize the living of the people, but at the same time it can significantly influence the extent of the peoples' economic activity and attitudes. When transportation is poor, surplus products of one locality are useless, and people are obliged to live a self-sufficient and closed economic life. Effective transportation can change surplus products into commodities, extending the sphere of economic and social activities. Thus, a self-sufficient and closed society will change into an open, circulating society living by division of labor and exchange. In a closed society, not only are the things produced different, but customs and manners are also different. In an open and circulating society, everything will gradually become uniform through continual contact and communication. In the vital statistics of Taiwan we can see a reflection of this change. During the early years of Japanese occupation

Note 9: As to the situation of medical facilities in 1945, see Li, Ting-yeh: op. cit. 12. As to the comparision of the situation of Taiwan with other parts of the world, cf. 27: Table 120.

Note 10: Tang, C. W.: "Railways in Taiwan". Chinese-American Economic Cooperation, Vol. 1, No. 5, 1962, Taipei, p. 66.

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien
Formosa AD1

With the advent of the Japanese in 1895, Lukang very soon lost its importance as a port, for Japan's plans for the colonization of Taiwan did not include maintaining Lukang as a trade and immigration center. The Japanese set about cutting off the movement of people and goods between Taiwan and the mainland, and, to divert the colony's trade from China to Japan, they built the port of Keelung in northern Taiwan (Barclay, 1954b:12, 18–42). The demise of Lukang both as a port and as a major urban center was hastened by the silting up of the harbor, which had begun even before the coming of the Japanese. As a result of Japanese indifference to Lukang as a port, the harbor soon became unusable.

The final blow by which the Japanese doomed Lukang's importance was the routing of the extensive west coast railroad system far from Lukang. The city could then neither be maintained as a major market town nor as a point of trans-shipment for the area's produce. Its decline as an urban center and as an influence on the surrounding area was reflected in an accompanying population decrease from one hundred thousand in the late eighteenth century to fifty-one thousand in 1954 (*Women te Lukang Chen*, 1954). The decrease took place despite the high rate of population growth in the rest of Taiwan.

Today, Lukang stands several miles from the sea, a city much diminished in size and importance. It offers little economic opportunity for its inhabitants, and despite some light industry, few village people are employed there. Nevertheless, although it is now a small, out-of-the-way city, it offers nearby villagers a convenient local marketplace and a center for some entertainment. Most important, it still functions as a religious center. From the earliest times the Chinese immigrants brought their gods with them from the mainland to Taiwan. These gods and goddesses, such as Matsu, became firmly established as important deities in Taiwan; the Matsu temple in Lukang is believed by the people of the area to be the oldest or second oldest Matsu temple on the island. For this reason Lukang is still one of the most important focal points for the religious pilgrimages of those who maintain loyalty to the Goddess Matsu.

The historical picture of this area at the time of the late Ch'ing dynasty comes from data furnished by older or better educated residents of the area and several local Chinese and Japanese gazetteers.[2] These various sources were used, wherever possible, to corroborate one another. The sources note that in the late nineteenth century the area was sparsely populated and that its inhabitants lived in constant fear of bandits. Up to the early part of the twentieth century dry farming produced most of the staples grown, since there was only a very limited system of irrigation. Crops like wheat, soybeans, sorghum, sweet potatoes, peanuts, a plant used to make dye for cloth, and broom grass were